

ABSTRACT

Novel microporous crystal morphologies are produced by combining a polar solute, a silicon or phosphorous source, and a structure directing agent. A premixed mixture of at least one surfactants and a hydrophobic solvent is added to the previously mixed three species and shaken to for a reverse microemulsion. The microemulsion is stirred overnight, at about room temperature and then iced for five to ten minutes. A metal source is added and vigorously shaken for about two minutes. The mixture is then aged for about two hours at about room temperature. After which, a mineralizer is added and the resultant mixture aged for about two hours at about room temperature. The mixture is then heated to about 100-220°C. The final novel product is then isolated.